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Methods that teach: developing pedagogic research methods, developing pedagogy

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ABSTRACT

This paper addresses ways of researching the pedagogy involved in building research methods competencies in the social sciences. The lack of explicit and shared pedagogy in this area make it particularly important that research is conducted to stimulate pedagogic culture, dialogue and development. The authors discuss the range of methods used in one study with the aim of teasing out pedagogical content knowledge, making implicit pedagogic knowledge more explicit and thereby malleable. The research design and methods deliberately foster dialogue with, rather than cast a judgmental gaze upon, teachers and learners of research methods. Rejecting observational methods on this basis, and declining action research because of the level of participant pedagogic knowledge and commitment required, the authors examine a combination of expert panel, video stimulated dialogue and diary methods for building pedagogic knowledge and culture. These 'methods that teach' are argued to offer value for other researchers working in new and emerging teaching fields, where pedagogy is particularly 'hard to know' and pedagogic content knowledge and pedagogic culture are underexplored or underdeveloped.

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Introduction: the importance of researching research methods pedagogy

Given scholarly debates over the relationship between research and teaching in higher education – the 'research-teaching nexus' (see Colbeck 1998; Robertson 2007; Brew 2010) – it is perhaps surprising that more attention has not been given to the ways in which research and teaching and learning combine in pedagogic research pertaining to developing research methods competences. Pedagogies often become the subject of research when there are particular challenges in the pedagogic context: inclusive pedagogy (e.g. Florian and Black-Hawkins 2011; Swann et al. 2012), arts pedagogy (e.g. Gadsden 2008) and early childhood pedagogy (e.g. Siraj-Blatchford and Sylva 2004) spring to mind. In higher education, pedagogic research has focused on lecturers' responses to challenges arising from policy drivers, adjusting to widening participation, for example, or making use of new technologies (Rienties, Brouwer, and Lygo-Baker 2013). However, despite the inherent challenges, historically the teaching of research methods has received little pedagogic attention. In this paper we explain this situation further, discuss the research approaches and methods suited to this area of pedagogic research, and outline our own response to it in the Pedagogy of Methodological Learning study. Wanting the research to be educative, with researchers, teachers and learners developing understanding alongside each other, our methodological approach takes dialogue as a founding

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principle. We thereby argue that the expert panel methods, video stimulated dialogue and group diary methods are methods that teach. Moreover, we align this with a sociocultural principle to recognize both the richness of context and importance of negotiated knowledge that is transformative for those engaged in methods education: teachers, learners and ourselves as researchers.

Literature reviews have highlighted the sparse nature of the pedagogic culture around the teaching of research methods. Wagner, Garner, and Kawulich (2011) identified this in the paucity of debate and the narrowness of research-based insight which has been limited by disciplinary and methodological boundaries. Similarly, Earley (2014) found that the literature on research methods pedagogy offered little guidance beyond the insights of individual instructors, courses, or institutions, leaving methods teachers with just their peer networks, an unconnected research literature, and trial-and-error as the basis for developing their practice. Kilburn, Nind, and Wiles (2014) went on to conclude that pedagogical questions were being considered, and even discussed (particularly active, experiential and reflexive learning approaches), but that this did not amount to the 'exchange of ideas within a climate of systematic debate, investigation and evaluation' seen by Wagner, Garner, and Kawulich (2011, 75) to represent a healthy pedagogic culture.

We contend that building capacity in research methods requires building the pedagogic culture surrounding this field. Pedagogic debate informed by research would support both the subset of teachers on whom methods teaching is imposed owing to its low status in university provision, and the subset of teachers with high levels of methodological expertise but little training in how to pass this on. Inherent to building methods capacity and pedagogic culture is building pedagogic content knowledge. This is the intersection of general pedagogic knowledge (broad principles that transcend subject matter) and content knowledge (about the subject matter) in the form of pedagogic knowledge specific to the subject matter (Shulman 1987). Pedagogic content knowledge allows what the teacher knows to be comprehensible to learners, because it involves knowing things like how to formulate explanations, represent content, and respond to misunderstanding. This is critically important praxis in the sense of reflection and action resulting in making prudent choices for bringing about change and new knowledge (Anwaruddin 2015).

Within the programme of pedagogic research discussed in this paper we understand pedagogy from a sociocultural perspective rooted in Vygotsky's (1978) ideas about dialogue and the relationship between social interaction and cognitive development. These ideas highlight the ways in which activity at a cultural and social level affects pedagogy. We hold that learning and teaching cannot be understood without reference to context: the situated, social experience of the learner and/or teacher. Moreover, we reach beyond teaching and learning (and related) activity to values: 'what people perceive to be meaningful, important and relevant' (Nind, Curtin, and Hall 2016, 3). The lack of explicit and shared pedagogy in the area of research methods education make it particularly important that research is conducted to: (i) understand the pedagogical approaches that methods specialists use to develop learners' methods competence; (ii) stimulate dialogue amongst methods teachers; and (iii) make this pedagogic development work sustainable through building pedagogic culture where there has been so little until recently.

Researching pedagogy within research methods education

The rationale surrounding our choice of research methods is the subject of this paper as this rationale usefully brings into sharp relief key tensions in pedagogic research methodology. Here a group of approaches are frequently applied and traditions have grown. We discuss these approaches and associated methods that are common when a sociocultural – contextually rich – position on pedagogy is adopted as in this research (hence, we exclude survey, despite its dominance in higher education research). We focus on pedagogic research associated with teacher inquiry, as characterized by action research (Carr and Kemmis 1986) and teacher research (Cochran-Smith and Lytle 1993). We summarize key aspects of each in turn and briefly examine how they have been applied to the study of research methods pedagogy.

Educational action research is striking among the established pedagogic research traditions. It systematizes learning by doing in research designed to improve practice alongside understanding practice in context (Carr and Kemmis 1986). This kind of action-oriented research is in keeping with the reflective practice (Schön 1987) that underpins training for higher education lecturers in the UK and beyond. Through educational action research, teachers have collaborated with peers, learners, and university partners to bring about evidence-informed developments in pedagogy that make sense from a grass roots perspective. Action research by teachers of research methods has tended towards reflective accounts of attempts to bring about pedagogic change (e.g. Barraket 2005). However, this approach can be uncomfortable to methods teachers who lack a background in education. Specifically, for teachers of experimental, computational and statistical methods, action research may be alien or anathematic to patterns of reasoning in their home disciplines.¹

Much pedagogic teacher research involves conducting an evaluative case study of one's own practice. Case studies and small-scale evaluations have proliferated as teachers study their own practices using the data most readily available to them (e.g. Ball and Pelco 2006; Spronken-Smith 2007; Howard and Brady 2015) or adding some interview data (e.g. Pecocz and Reid 2010). Teacher-researchers treat classroom artefacts as evidence and share rich descriptions of intrinsically interesting pedagogic scenarios and one-off intervention studies. However, these data are usually expedient and connections with theory or literature may be tenuous. In research methods education, examples of case studies with elements of action research demonstrate efforts to share practice (see Buckley et al. 2015; Scott Jones and Goldring 2015). However, teacher-researchers do not necessarily equate this with doing *pedagogic* research, as pedagogic research is often outside of methods teachers' own disciplinary domains. As Adendorff (2011) observes, this trans-disciplinary scholarship inducts challenges to researcher identity, mastery of educational discourses and reward concerns. Nonetheless, pedagogic reflective narratives (e.g. Silver and Woolf 2015) are characteristic of Schön's (1987) reflective practitioner and developing practical, pedagogic knowledge in situ. Such work enhances pedagogic culture incrementally.

Teacher inquiry, Ermeling (2010, 378) argues, 'is about making the study and improvement of teaching more systematic and "less happen-stance"'. Its value lies in collective commitment to solving local pedagogic problems with evidence. Ermeling and others though have been careful to establish that pedagogic research, which is 'firmly situated in its relevant literature' and which 'makes a substantial contribution to that literature' (Prosser 2005, 8; cited by Morón-García and Willis 2009, 3–4; HEFCE et al. 2006, 14; cited by Morón-García and Willis 2009, 5), is distinct from 'reports ... providing descriptive and anecdotal accounts of teaching developments and evaluations' (HEFCE et al. 2006, 14; cited by Morón-García and Willis 2009, 5). The latter 'do not constitute pedagogic research' for the UK Research Assessment Exercise (now Research Evaluation Framework) (HEFCE et al. 2006; 8 cited by Morón-García and Willis 2009, 5). Again, while making an important contribution, pedagogic research needs to also move beyond the local and immediate to the practices of methods teachers as a set of related communities in diverse pedagogic contexts.

Another strong pedagogic research tradition involves observational methods. While research about educational effectiveness tends to focus on outcomes data and what can be inferred about causes, research about pedagogy tends towards process data and what we can see going on. Classroom observation is common in contexts where it is not easy to talk with learners, but it has barely been used in methods classrooms. Non-participant, structured observation methods position the teacher and the learner as the subject of the researcher's gaze. This can be problematic for pedagogic research if it means stripping the observed practice away from the beliefs and cultures that underpin it (Nind, Curtin, and Hall 2016). In contrast, ethnographic observation in pedagogic research is designed to understand the culture. If undertaken by teacher-researchers as insiders this can suffer from the major challenge of making the familiar seem unfamiliar, experienced particularly in 'at-home' ethnography (Alvesson 2009). As observation of pedagogy in research methods education is relatively new, a fresh lens for pedagogic researchers may be possible. As qualitative researchers we have found statistics classrooms to have both strange and familiar features in the ethnographic

sense, discounting the need to always make the familiar strange (Van Maanen 1995). We decided to build ethnographic and collegial observation into the case studies at the final stage of our research.

Video has potential as a method for involving teachers and researchers in observational reflection on pedagogic processes. Video, like real-time observation, can be *on* or *with* teachers (and learners) and is often used within the stimulated recall tradition. Here, the observational video data supports a process of recalling what happened in a pedagogic interaction and probing the thinking part that cannot be seen. This has often been used in classrooms with young children, even extending the element of recall into collaborative dialogue with teachers to support them in 'surfacing and articulating' (Moyles, Adams, and Musgrove 2002, 470) their pedagogical values and beliefs. While not used before in studying research methods education, this was a method that was attractive in many ways for our Pedagogy of Methodological Learning study as we discuss later.

Next in the paper, we turn to the methods adopted in the Pedagogy of Methodological Learning project. Here we argue for the particular salience of these methods, not just because of their 'fit' in research terms, but as research methods that teach. This is critical as the twofold aims of building pedagogical culture and understanding pedagogy in the arena of research methods education arena are tightly intertwined. We needed research methods that also functioned as dialogic tools that could build pedagogic knowledge. It is this dualism of research methods that teach that we consider holds particular value for other researchers who are working in new and emerging teaching fields, where pedagogy is particularly 'hard to know' (Nind, Curtin, and Hall 2016, 51) and pedagogic content knowledge (Shulman 1987) and pedagogic culture are underexplored or underdeveloped.

Research methods for a range of purposes

The particular methodological needs and nuances of our research goals and context bear examination. We clarify these first and then pursue their implications in terms of the methodological challenge we necessarily set for ourselves. This leads to a discussion of the methods themselves.

First, our research represents departure from teacher inquiry in that, although we are methods teachers, we were not concerned with researching our own practice but a set of diverse practices related to the different methods being taught in short or long courses, inside and outside of universities. As we have outlined, reflective practice contributions to the field perform an important function but they do not come from a place of pedagogic research and can be unconnected to theory or each other. This meant a need for a more comprehensive look at research methods pedagogy as a field rather than a set of individualized practices.

Second, the methods teachers and learners with whom we needed to engage were not well-placed to conduct their own pedagogic research independently, but could work with us co-productively. Methods teachers in the social sciences may be from any of the social science disciplines; their disciplinary and methodological expertise usually provide them with the necessary content knowledge for methods teaching. Their pedagogic knowledge is (as we found in the study) likely to come from experience, peer dialogue and primarily trial-and-error in responding to the constraints they recognize. While they develop pedagogic content knowledge, they do so in a very tacit way, making it hard for them to recognize and share. This may make for invisible pedagogy (Bernstein 1975), limiting the potential for teachers and learners to optimize ongoing learning and engagement. Collaboration with us as pedagogic researchers was, therefore, a productive way to building pedagogic culture. This mode of collaboration was informed by the teacher-led and action-oriented observation approaches of Japanese lesson study (Cerbin and Kopp 2006) applied in school-based research, while still enabling widespread knowledge transfer beyond the grass-roots, local understandings usually associated with lesson study methods (Lewis, Enciso, and Moje 2007).

Our positioning in the research was complex. As teachers and learners of research methods ourselves, although we would be outside the situations we would be researching, we could not be outsiders entirely. Nor could we be entirely insiders. Carroll (2009) uses the term 'alongsider' for researchers working with and alongside practitioners, placing a shared lens on the practice. This,

and her feminist concept of ‘feeling alongside’ (254) was useful when thinking about our stance. Understanding that pedagogy is hard to know (Nind, Curtin, and Hall 2016), and that ‘teachers themselves have difficulty articulating what they know and how they know it’ (Shulman 1987, 6), our collection of methods needed some way of working alongside teachers and learners to tease out the pedagogic content knowledge at work. Moreover, the paucity of pedagogic culture in the field meant we needed to combine exploring research methods pedagogy with building pedagogic culture, rather than pedagogic culture building following on later. All of these purposes for the research culminated in the need for our research methods to have a transformative function for everyone involved in it – the methods needed to be methods that teach. Our own positionality, not just as teachers, learners and researchers, but as individuals with a history of working with disabled people, reinforced our cognizance of the political imperative for research to be transformative. Our research position and needs led to the challenge we articulate here: *to find, adapt or develop research methods suited to collaborating on pedagogic knowledge production, reflecting an alongside vantage point, and generating genuine dialogue and transformation*. The challenge warrants further articulation as there are elements of it that will resonate for other pedagogic researchers. Moreover, while we faced the one challenge of bringing all these elements into play, no one method could meet the whole challenge.

The challenge of research methods that would allow us to work *with* teachers and learners in ways that could educate and transform us all has echoes of the wider move towards democratizing research or making it more inclusive (Seale, Nind, and Parsons 2014). This was about designing research that would avoid placing those teachers and learners as the objects of research done by others *on* them and respecting their agency as knowers and producers of knowledge, engaging in developing ‘shared knowledges and collective understandings’ (Erel, Reynolds, and Kaptani 2017, 303). However, participatory action research was not our launching point, as this would require methods teachers to identify a problem for themselves and sustain interest in working through cycles of action and reflection in addressing it. Individual methods teachers and small teams have been engaged in problem-solving, but the active commitment to understanding and developing pedagogy needed for an action research approach network is rare. We wanted to stimulate pedagogic interest by starting with a research project that would enhance understanding of how research methods teachers understand and enact their craft. This meant that, despite the obvious and educative transformative potential of action research – the ‘pedagogical practice of action research’ as Santoro Franco (2005, 1) proposes – we needed an alternative research design that would still incorporate a developmental element.

Potential teacher and learner participants could hardly be seen as marginalized or subjugated people kicking back against research that has harmed them, yet we still did not want a power dynamic that put us in charge of their experiences. Even academia, which some see as a rarified, elite and privileged space, is a place where community dialogue – through and about pedagogy – can be seen to be marginalized or occluded by the effects of neo-liberalism on the university. The marketization of higher education has pushed the discourse away from pedagogy and towards a discourse of metrics and consumerism. Despite the substantial educational and cultural capital that academics have accrued (Gill 2009) they are still compelled to act in highly individualized ways. With discipline as the locus around which academic identities gravitate (Clarke, Hyde, and Drennan 2013), methods teachers’ identities may be liminal – with teachers identifying more strongly with disciplinary research roles, methods and culture, rather than having a fully-fledged (or pedagogically informed) teacher/educator identity.

In the contested field of higher education, teachers and learners (like teaching, learning and research) are often divided, as if they are not part of a relationship (Knewstubb and Nicholas 2017). Our methods needed to free us of this dynamic of division and regulation and instead support shared community dialogue. In continuing professional development terms this is about rejecting the transmissive model of delivering knowledge and demanding compliance and favouring a collaborative model of co-construction which is more likely to lead to ‘transformative change’

(Fraser et al. 2007, 167). In transformative research terms it means widening the 'repertoire of social action within and beyond the research process' (Erel, Reynolds, and Kaptani 2017, 303).

Given the forces acting upon the research methods education arena and the actors within it, establishing action research partnerships were beyond our reach in a way that establishing the ethos a community of inquiry was not. Whatever methods we chose, they needed to be framed by the alongside dynamic, that is, methods that would work to involve us all and serve us all. This changed the gaze from that of researcher on the teacher and learner, to a group of teacher-learner-researchers on ourselves. The boundaries between our roles would need to become a little blurred to allow us all to see in different ways. This was not the boundary-crossing involved in bridging the difference between people inside and outside the academy, but it was still transcending different ways of knowing by exploring boundary experiences (Clark et al. 2017). Just as Carroll (2009, 249) argues that 'feminists have critiqued video as being a tool of the masculinist gaze, a gaze of objectification and unequal power relations', we were rejecting methods that cast an expert, controlling research gaze down on participants. Methods that teach, as we position them in this paper, need to find, see and articulate expertise, and they need to position expertise as always in process, forever developing rather than fixed. This is the foundation for pedagogic dialogue that underpins pedagogic culture building.

Researching methods pedagogy – deploying appropriate methods

We now describe and reflect upon the methods in our research. We outline what they have offered us, with respect to the key issues raised above, and what they offer other pedagogic researchers working in higher education and elsewhere, in spaces where pedagogical culture is underdeveloped.

Expert panel method

Firstly, our research design developed and applied an expert panel method. This involved interviews with 'pedagogic leaders': actors in the field of research methods whose teaching practice can be seen to 'set the cultural tone' (Lucas and Claxton 2013, 15) of much contemporary methods teaching. These participants were selected on the basis of methodological excellence, landmark publications and significant teaching experience at a postgraduate level. A preliminary phase had developed the methods initially proposed for education by Galliers and Huang (2012) for use with a national panel. In the international iteration for this study we developed this method further, foregrounding dialogue (Lewthwaite and Nind 2016). Following individual interviews with thirteen expert panellists, we conducted an initial thematic analysis of the data and invited the panellists to reflect upon summaries of the key themes and to discuss these between them. This panel stage was conducted via an online discussion forum over a four-week timeframe. From this point, a second wave of thematic analysis was conducted, incorporating the forum panel data.

This approach was designed to deepen conceptual exchange with and between participants. Within the interviews, and subsequent panel discussions, we anticipated that experienced teachers would be able to articulate aspects of their pedagogy and that in group discussion we could develop an understanding of where consensus lay, the pedagogic content knowledge specific to certain kinds of methods teaching, and the value that experts place upon these pedagogies. Importantly, the panel (community) aspect of this method gave participants space for reflection (in and around the interview) and dialogue that itself was valued and allowed exchange of pedagogic ideas and interests.

Learning from the reflection required in the method was commented upon by the expert participants: Sharlene Hesse-Biber² reflected that 'I learned a lot, too' and W. Paul Vogt observed that it has been 'interesting for me to think through my own views'. However, the social, dialogic dimension spurred deeper engagement: looking forward to the panel discussion, was, for Vogt, a greater opportunity that was explicitly pedagogical:

I'm sure it'll be even more interesting to learn about what others have to say, and then for all of us [experts] to learn about what we've all had to say about it [emergent data]

The idea of getting the interviewees involved in thinking about the results of the interview, and commenting on it. That would be wonderful work.

For Hesse-Biber, speaking about the pedagogy of methodological learning had transformative potential:

You know we're not isolated folks, but we're speaking as a voice, a common set of themes and voices out there, to make some change.

For Cesar Cisneros-Puebla, based in Mexico City, the international dimension of dialogue spurred by the research suggested globally transformative potential:

[This] could be important for us, as qualitative research methods teachers, to get the opportunity to see what is going on around the world [...] otherwise it seems like it's very obscure. [...] It's important, not just for you, but also for us, to recognize what we are doing, why we are doing [it] and the way that we are doing it. How we can change, or even how we can produce another way of teaching advanced methods. [...] I have no specific view on that, and I will wait for your feedback to see what else is possible.

The need for spaces for dialogue about pedagogy was felt within quantitative and mixed methods teaching communities also. Andrew Gelman identified 'a lot of dispersed knowledge' and 'duplicate effort' in quantitative teaching, with little sharing. John Creswell commented: 'whether it's forums or whether it's gathering people to really discuss [...] teaching research methods. We need more of that in mixed methods right now'. He spoke of the 'need to have a better dialogue about teaching research methods', and referring to our expert panel research method, 'I just don't have an occasion to engage in that very much, so you've given me this wonderful opportunity.' Hesse-Biber summed up the need the method was meeting:

... there has to be the pedagogical space, also for people like me, a teacher who wants to teach outside the box, who wants to do mixed methods. I want to engage with my colleagues that do this, from around the globe. I can't engage with people, lots of people locally, and I want a space where I can talk more about my own pedagogical challenges, I want to reflect on them with a group of people that share this with me, and I want to share resources, I want to share new ideas, to continue to foster a kind of interdisciplinary pedagogical culture.

The role of the discussion forum as a pedagogic mode for research is also important here. Kilburn and Earley (2015) have previously written about the utility of online discussion fora for engaging methods learners in discussions of pedagogy, however, this writing has not attended to the pedagogic value of digital methods that incorporate social media for dialogic ends. The shared context of the online panel discussion has pedagogic capacity and impetus. Specifically, asynchronous, social writing is particularly useful for sharing complex ideas (for us, pedagogy), 'ideas ... enmeshed with other knowledge component and require interactive modes of knowledge sharing' (Crook and Lewthwaite 2010, 451). This match between the participatory architecture of the social media tools, and dialogic methods, is discussed further with reference to our online diary methods.

Even within the expert panel teachers could not always fully articulate their pedagogy despite their rich teaching strategies and techniques and deeply considered pedagogic values. Many expressed doubts about their pedagogical leadership. At the start of her interview, Yvonna Lincoln, an educator with rich and diverse experience riley observed: 'It's likely to be a short conversation. I was reading the questions this morning and I thought I don't know the answer to most of these'. Richard Rogers, leader in digital methods and associated pedagogies, echoed this concern 'Yeah, [...] when I scanned the questions, I said "oh I need to think about this one"'. This is not to question the pedagogic expertise of these participants, but to note how they were expressing the challenge of recognizing and articulating their implicit knowledge. In such instances, the research itself became most overtly pedagogic with critical moments within interviews and discussion evidencing the co-construction of new knowledge that was open to scrutiny by both researcher and

participant. For example, the interview sometimes developed a line of enquiry that illuminated a deeply held methodological and pedagogical approach that, whilst deeply invested in the teaching strategies and techniques applied in the methods classroom, had not previously been articulated.

Interviewer: I'm really interested in what you mentioned about *hacking culture* informing digital methods [...] Because I wonder, reading into your some of your previous answers in terms of creating *sprints* and [using] these kinds of teaching methods, do you see yourself as re-purposing teaching methods from other disciplines in a sense as well as re-purposing technologies?

Richard Rogers: Yeah. Yeah, nice one.

In such instances, we see how 'pedagogy as enacted' (Nind, Curtin, and Hall 2016) can be surfaced and become open to discussion and debate, which is critical to the development of pedagogical culture. By moving from individual interview to shared discussion, the surfaced pedagogy(ies) began to gain the communal dynamic necessary to substantiate this culture.

The next part of the research design was to test the resonance of knowledge produced with different methods teaching communities. The aim was to explore the ways in which the emergent themes resonated (or not) with other groups of teachers. This validation across different communities (via UK focus groups with teachers of qualitative, quantitative and mixed methods and those who teach methods online) offered methods teachers opportunities to meet and discuss pedagogy with other methods teachers. Just as this was appreciated by the experts it was appreciated again by the focus group teachers who otherwise only touched upon discussion of pedagogic decision-making infrequently during course meetings.

Video stimulated dialogue

A second important strand of our research design is the use of video stimulated dialogue. This method of researching pedagogy involved recording video of teachers and learners (one camera angle on each) in action. Video excerpts, selected by researchers or participants, were then used to stimulate dialogue during a focus group with both teachers and learners immediately after the class. For video playback, camera views could be switched to follow the flow of class activity, or combined into a single picture to illustrate multiple perspectives simultaneously. In this way, detail was maintained, and the method held a mirror to the minutiae of practice and process.

Whilst video stimulated recall is already an established method for helping teachers to reflect on their practice and video of teaching events has also been used to spur reflective dialogue, the use of video to stimulate recall, reflection and dialogue between teachers *and* learners is new. It moves the level of focus from the reflective conversations that characterize our expert panel, to classroom action (Nind, Kilburn, and Wiles 2015). Moreover, it embeds observational data within particular kinds of research relationships, made more democratic by involving interactions and shared interpretations with teachers and learners about what that which could be observed and the thinking underpinning this.

This method allowed researchers, teachers and learners to consider critical moments, identify 'knowledge in action' (Nind, Kilburn, and Wiles 2015, 564) and generate knowledge that is specific to a particular learning and teaching event. The video-stimulated focus groups were conducted so as to create a sense of common experience and understanding through exchange of perspectives, rather than to establish consensus. The opportunity to reflect together, in pedagogical terms, is powerful. The use of video cameras inducts the non-discursive (unspoken) discourses of the unequal gaze (Foucault 1977), judgement, scrutiny and evaluation; cameras are irreducibly apparatus of another's gaze. This was minimized through the use of unobtrusive cameras or deconstructed, for example, by locating the researcher's view on the video content in plain sight as participants enter the teaching space, implicitly inviting participants to share the researcher perspective. Most powerfully though, as Clarke (1997) and Powell (2005) observe, the knowledge generated together in video stimulated dialogue can inform practice as well research; by ensuring that we 'talk with whom we

watch' (Alexander 2000, 269). In this way, concerns regarding gaze in observational and video methods can be allayed.

With facilitation, the video stimulus and dialogue created opportunities for participants to voice differing accounts of engagement, allowing the dialogue outside the class to gesture to internal processes within. Dialogue moved from researcher-led, to teacher and learner-led, to meaningful co-production (Nind, Kilburn, and Wiles 2015). In several instances subterranean discourses were brought to the surface, giving a window on otherwise oblique learner activities – listening, consideration and reflection. For example, following up a video excerpt of small group discussion activity, one learner participant reflected:

Is not talking, though, a sign of not being included? Because I know when I speak, I often choose the moments I want to speak in, and I can come across as quite quiet sometimes, [...] and it's not because I don't feel included necessarily.

In another example a group worked together to identify a video excerpt of a period when the learners were struggling to get something and they knew the teacher understood that. As one learner explained to the teacher: 'you wanted a reaction because you kept going and you moved around and you kind of sat down and you [...] said] "shall I say it again?"'. Teachers and learners were repeatedly exposed not just to new insights into their own and each other's strategies, but to examples of how attentive they were to each other and how sensitive to each other's agendas and needs. This enriched even team teaching: 'A lot of times we [the teaching team] were talking and thinking about it [the teaching], partly helped by you (laughs). We wanted to make it good' (team teacher). This stood in contrast to interactions in more bureaucratic situations and had potential to transform their pedagogic relationships and approaches.

Diary method: the methods diary circle

Diary methods, at their most basic, involve participants making entries in a notebook about events as they happen, giving researchers access to data on thoughts, sensitive subjects and embodied experiences not available through other methods. These data are regularly updated, usually private, contemporaneous and time-structured (Alaszewski 2006). With the rise of diaristic (chronological, sequential) social media and multi-modal blogging, there is enormous potential for diary methods to become more creative and communal (Bartlett and Milligan 2015). Social writing and the feedback it inculcates allows an author to reformulate their knowledge to cater 'in a way more suited to the needs of the receiver' (Crook and Lewthwaite 2010, 451–452).

In our study we wanted to include diary methods as a way of accessing learner perspectives on their methods learning journeys over an extended period. This was important as even less attention has been paid to learning research methods than to teaching them. We had little other access to what learners did outside classrooms or computer labs to prepare, follow up, sustain or complement teacher-directed learning. Again though, we wanted to avoid just the researcher gaze on participant data and so we melded the diary method idea with the idea of a collaborative inquiry circle from Broderick et al. (2012). Their method involved trusted teacher peers coming together for support and critical challenge, discussing journals of their experiences coupled with artefacts. There is obvious transformative potential in reflecting on experiences together with others in a similar situation and so we recruited ten participants to an online diary circle, recording and sharing their experiences over 24 months on a password protected blog. Participants, who were moving through different stages of a research doctorate or into and across research careers, met together with us in person at the beginning, middle and end of the period to tease out and commentate on key themes in their communal data, alongside regular blogging and commenting activities. The intention was to build community and democratize in some small way the challenge of making sense of the diary entries and comments, and what they meant for the study, alongside enabling the participants to process what they meant for them.

The diary circle is ongoing but we have already been working together to understand the metaphors in the entries which are common and powerful. The data often focus on the pain in the learning process, the 'groan' of it; this is the reflective part. The dialogic part, however, is where the method supports collaborative learning; writing for an audience expands the reflexive space. The participants, who had not met before the study, have offered each other mutual support, commenting on each other's posts: 'I just want to say that I feel like this ALL THE TIME', 'I really believe in what you've said about the importance of peer support', and 'don't forget we are a source of support. [...] when you are struggling, post on here – we may not have the answers, but you might find talking about the problem, and us responding quite helpful!' There is a pedagogic element here in logging the lessons learned, the route to them and the emotions associated with them. Even so, the diary added to the challenges experienced too, as one participant observed the challenge of understanding what learning is outside a formal context, reflecting 'I found it difficult to identify my "learning" and then blog about it'. We are about to start work on co-authoring a paper with some of the more committed diarists, transforming their participation into academic as well as pedagogic capital.

Case studies

Our own exploration with finding methods to research pedagogy in ways that are supportive of the pedagogic process has culminated in the conduct of two contrasting case studies of research methods pedagogy in action in short courses. Analysis of these will combine insights into pedagogy as specified, enacted and experienced (Nind, Curtin, and Hall 2016) gained from the methods discussed here, and they should help us and the community of stakeholders to understand how methods pedagogy is imbricated within particular social contexts.

Implications for future research

Research methods for researching pedagogy warrant special attention among education researchers. There is scope to move forward from the strong foundations of teacher inquiry in new ways while still retaining an educative function for those involved. We have used the challenge of our own research project on the pedagogy associated with learning research methods to illustrate what methods can do to teach and to transform if the methods are framed with these goals in mind. Working with and alongside teachers and learners to deliberately bring different perspectives into dialogue has taught us a great deal, not just about pedagogic content knowledge and approaches, strategies and tactics of teachers and learners, but about identity and emotional labour. Our experience has been that methods that are designed to be dialogic can create supportive relationships; they can bring people in to new understandings of pedagogy, involving them with us in an illuminative process of coming to know that which is hard to know. This is particularly important for areas where the pedagogic culture is underdeveloped as in research methods education. The pedagogies associated with teaching young people with moderate learning difficulties (in contrast to those with autism, for example) or the teaching of accessibility in computer science (Lewthwaite and Sloan 2016) may be other areas where the pedagogy has been implicit, under-theorised and poorly understood. As such, the methods described in this paper, we argue, have wider application and importance in these and similar situations.

Notes

1. See Potter (2008) and Adendorff (2011) on the challenge of educational discourses for researchers and teachers based in scientific disciplines.
2. Due to the status and specialisms of many of the expert panellists, retaining anonymity before a social science readership would be unfeasible. Therefore with their consent, and advance ethical approval, expert panellists are referred to by name.

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